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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/459,831	12/13/1999	MICHAEL S. SHAFFER	SHAFFER-4-3-	1673

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EXAMINER

WAITE, SCOTT A

ART UNIT

PAPER NUMBER

2663

DATE MAILED: 03/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/459,831

Applicant(s)

SHAFFER ET AL. *HA*

Examiner

Scott A. Waite

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 December 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-63 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14 and 16-20 is/are allowed.
- 6) ☒ Claim(s) 1-13, 15, 21-56 and 61-63 is/are rejected.
- 7) ☒ Claim(s) 57-60 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Drawings*

1. Figure 5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Double Patenting*

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 2 & 32 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 22 of copending Application No. 09/459,439 in view of Nichols et al (USPN 4,875,206). Claim 22 of copending Application No. 09/459,439 discloses all the features of claims 2 & 32 except for the LLD status output, PLD status input and a channel connecting them. In Fig. 7, Nichols discloses a link between MINT 11 and switch plane 121 that is used as a status link for communicating the status between MINT 11 and switch plane 121. See Col. 22, lines 38 – 51. The claimed LLD status output reads on MINT 11 and the claimed PLD status input reads on switch plane 121. Therefore, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to combine copending Application No. 09/459,439 with Nichols to include a status link between claimed LLD output and PLD input of claim 22 when motivated to communicate status between PLD and LLD units.

This is a provisional obviousness-type double patenting rejection.

4. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

5. Claims 1, 3-13, 21-31 & 33 – 56 & 61 - 63 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 22 of copending Application No. 09/459,439. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

#### ***Claim Objections***

6. Claim 37 is objected to because of the following informalities: It appears that the number 129 should be 29. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 3-5, 7, 15, 34, 37, 39, 45 & 46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. As to claims 3, 5, 34, 37, 45 & 46 it is unclear what the third and fifth communication channels are as they are missing from claims 3, 5, 34, 37, 45 & 46, but yet there is a fourth channel and a sixth channel claimed.

Art Unit: 2663

- b. Claim 7 recites the limitation "wherein said PLD comprises **one of a** synchronous optical network (SONET) device **and** a synchronous digital hierarchy (SDH) device. It is unclear if both devices or a selection of one device is meant in the claim. According to page 5, lines 15 – 18 of the specification the examination of the claims will be done assuming a selection of one or the other is meant.
- c. As to claims 4, 15 & 39 it is unclear what the scope of the phrase "substantially identical" is as used in claims 4 & 39. The specification fails to further specify what is meant by this terminology (Page 23): "Symmetrical interfaces may simplify design and manufacturing and offer other advantages including loop-back capabilities as indicated by the dotted loopback path 263 as illustrated between the PLD send interface 203 and the PLD receiver interface 230 will be appreciated by those skilled in the art".
- d. Claim 45 recites the limitation "deskewing" in line 2. There is insufficient antecedent basis for this limitation in the claim.
- e. Claim 14 recites on line 23 "connected said at least". The sentence is awkward and confusing. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 2663

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1,6,7,29 – 31, 38, 40, 41 & 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rich (USPN 5784370) in view of Akata et al. (USPN 5,594,724).

f. As to claim 1 & 29 - 31, in Fig. 3 Rich discloses a PLD 310 and a LLD 308 where information signals are sent over parallel channels 322 but fails to disclose a separate out of band channel for control signals. In Fig. 3 Akata discloses a transmission convergence layer apparatus with parallel control links between an SDH terminating section and a TC layer calculating section used for making requests. See col. 4, lines 35 – 43. In Fig. 3, the claimed PLD control output reads on "D OUT" and the LLD control input reads on the unshown connection at the other end of the "D OUT" channel. Similarly, in Fig. 2 the claimed LLD control output reads on the exit of the "D OUT" from 13 and the PLD control input reads on the input of "D OUT" to the unshown other end of channel "D OUT". Therefore it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use a parallel control channel between LLD and PLD layers when motivated to make requests in an SDH compatible system.

g. As to claims 6 & 40, in fig. 3, Rich discloses an ATM interface 308 (LLD). The claimed LLD reads on the ATM interface.

h. As to claims 7 & 41 Rich discloses all the features except for a PLD comprising one of a SONET and a SDH device. In another patent concerning ATM technology Akata teaches that a SDH (Fig. 1, detail 110) generating section

can interface with an ATM system (Fig. 1, "ATM IN") in order to reduce the hardware amount by causing a plurality of paths to share a circuit for generating or terminating a TC layer (Col. 6, lines 19 – 23). Therefore, it would have been prima fascia obvious to one of ordinary skill in the art at the time the invention was made to extend the invention of Rich to include a PLD comprising a SDH device when motivated to reduce the hardware amount.

i. As to claim 38, in Fig. 3 Rich discloses a serializer 330 (PLD) and deserializer 336 (LLD) that are operating in a push-push configuration. The claimed push–push configuration reads on the one way arrow of 320 and the one way arrow from 336 to 338.

j. As to claim 47, Rich discloses all the features except for parallel communication channels over electrical conductors between the PLD outputs to respective LLD inputs and also between LLD outputs to respective PLD inputs and their associated inputs/outputs. However, Rich does teach that it is typical of ATM/physical layer interfaces to have parallel ribbon cables (parallel electrical conductors) as connections and also teaches some solutions to the associated problems with this type of system. See col. 2, lines 43 – col. 3, line 30. Therefore, it would have been prima fascia obvious to one of ordinary skill in the art at the time the invention was made to extend the invention of Rich to include parallel electrical conductors when motivated to interconnect the physical layer with ATM layer circuits.



11. Claims 2, 32 & 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rich in view of Akata as applied to claims 1 & 29 above, and further in view of Nichols et al (USPN 4,875,206). Rich and Akata disclose all the features of claims 2, 32 & 33 except for the LLD status output, PLD status input and a channel connecting them. In Fig. 7, Nichols discloses a link between MINT 11 and switch plane 121 that is used as a status link for communicating the status between MINT 11 and switch plane 121. See Col. 22, lines 38 – 51. The claimed LLD status output reads on MINT 11 and the claimed PLD status input reads on switch plane 121. Therefore, it would have been prima fascia obvious to one of ordinary skill in the art at the time the invention was made to combine the inventions of Rich and Akata with Nichols to include a status link between claimed LLD output and PLD input.

***Allowable Subject Matter***

12. Claim 14 & 16 – 20 allowed.

13. Claims 57 - 60 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott A. Waite whose telephone number is 703-305-7869. The examiner can normally be reached on Monday-Friday 8-4:30.

Art Unit: 2663

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (703) 308-5340. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 308-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Scott A. Waite  
Examiner  
Art Unit 2663

saw *SW*  
March 7, 2003

*Chau T. Nguyen*

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